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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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02/09/2000

Stephen William Davies

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06/28/2006

LUCENT TECHNOLOGIES INC.

DOCKET ADMINISTRATOR

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EXAMINER

APPIAH, CHARLES NANA

ART UNIT

PAPER NUMBER

2617

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/501,168

Applicant(s)

DAVIES ET AL.

Examiner

Charles N. Appiah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-17 and 20-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10-15, 17 and 19-22 is/are rejected.
- 7) ☐ Claim(s) 8 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Allowable Subject Matter

1. The indicated allowability of claims 1-8, 10, 17 and 21 is withdrawn in view of the newly discovered reference(s) – Bolliger et al. (5,195,090), La Porta et al. (6,434,134) and Haartsen (5,598,459) to overcome the indicated allowable subject matter in the claims. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

2. Claims 1-4, 5 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by **La Porta et al. (6,434,134)**.

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Regarding claim 1, La Porta discloses a method for facilitating secure handoff in a network having at least first and second wireless base stations and at least one wireless mobile terminal (see Figs. 13-15), the method comprising the steps of: receiving a request from at least one wireless mobile terminal for a handoff from a first base station to the second base station (path set up message being initiated and sent by a mobile device during mobile device handoff to another base station (see col. 12, line 66 to col. 13, line 10) and transferring security information that was originally

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supplied by a central security node and was not used by the first base station to the second base station in response to the request (instant handoff path setup message is sent and a mobile device is handed off to a new base station, authentication information is transferred from the user's old base station to the new base station and that a mechanism such as HLR authentication or the RADIUS protocol authentication mechanism can be used (see col. 32, line 58 to col. 33, line 12).

Regarding claim 2, La Porta's teaching of using an HLR authentication as is currently performed in cellular networks (see col. 33, lines 5-12) meets wherein the security information includes a set including at least a random number, an authenticator derivable by the wireless mobile terminal but not the first or second base stations and a key.

Regarding claim 3, La Porta further discloses wherein at least a portion of the security information is used to validate at least one mobile terminal to the second base station (old base station approving path set up message only if the mobile device is able to authenticate itself in the path set up message and the authentication information, see col. 33, lines 1-5).

Regarding claim 4, La Porta further discloses wherein the security information transferred from the first base station to the second base station in response to the request is less than all the security information received by the first base station (feature of authentication information for the user as transferred from the old base for the particular hand off, see col. 32, line 65 to col. 33, line 5).

Regarding claim 5, La Porta further discloses wherein all of the security information received by the first base station was received from a wireless mobile terminal validation system (feature of RADIUS protocol authentication mechanism or HLR authentication, see col. 33, lines 3-12).

Regarding claim 7, La Porta teaches wherein the transferring security information from the first base station to the second base station in response to the request is performed only when the first base station knows the second base station (feature of path setup message being initiated and sent by a mobile device during handoff to another base station included within the domain to which the mobile device is attached, see col. 12, line 66 to col. 13, line 12).

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 10, 17 and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by **Bolliger et al. (5,195,090)**.

Regarding claim 10, Bolliger discloses a method for performing handoffs in a network for providing wireless communication service having at least first and second wireless base stations and a least one wireless terminal (col. 3, lines 5-12, handover; col. 1, lines 36-43, base stations, cell zones, radio-telephones), the method comprising the steps of: transmitting a request, from said wireless terminal for a handoff between said first base station and said second base station (col. 3, lines 5-12, handover);

receiving a response to said request at said wireless terminal, when said second base station knows said first base station prior to receiving said request, said response indicating that said second base station can engage in expedited handoffs with said first base station (col. 3, lines 5-12, second radio connection is established for handoff rates faster than those needed for traditional handoffs); and connecting said wireless terminal for user traffic to said base station; wherein said expedited handoff employs information about said wireless terminal transferred from said first base station to second base station (col. 3, lines 5-12, soft handover).

Regarding claim 17, Bolliger discloses a method for performing handoffs in a network having at least first and second wireless base stations and a least one wireless terminal (see col. 3, lines 5-12, col. 1, lines 36-43, base stations, cell zones, radio-telephones), the method comprising the steps of: transmitting a request from said wireless terminal for a handoff between said first base station to said second base station; when said second base station does not know said first base station prior to receiving said request (see col. 3, lines 5-12, handover), receiving at said wireless terminal an indication that it must connect to said second base station without benefit of security information supplied from said first base station (col. 3, lines 5-12, soft handover; no security information involved).

Regarding claim 21, Bolliger discloses a method for performing a handoff in a wireless having at least first and second base stations and a least one wireless terminal, network the method comprising the steps of: receiving a request by said second base station, from said wireless terminal for a handoff between said first base station to said

second base station (col. 3, lines 5-12, handover); performing an expedited handoff using previously unused security information when second base station knows said first base station prior to receiving said requesting and performing a non-expedited handoff when second base station does not know said first base station prior to receiving said request (col. 3, lines 5-12, second radio connection is established for handoff rates faster than those needed for traditional handoffs; second connection hence enables expedited handoff).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 11-16, 19-20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bolliger et al** as applied to claims 9, 17 and 21 above, and further in view of **La Porta et al. (6,434,134)**.

Regarding claims 11-15, 19, 20 and 22 Bolliger fails to disclose wherein the information is security information which is received from a security center, a base station other than the first or second base stations and the security information includes at least one from the set consisting of a password, a challenge response pair and a challenge-response cipher key tuple and wherein the information is security information that is received over a network for inter-base station communication.

In an analogous filed of endeavor, La Porta discloses a system for allowing wireless devices to access packet based networks using dynamic address assignment wherein a mobile user connected to a base station can change its point of attachment from one network or subnet to another (see col. 4, lines 33-49). According to La Porta when an instant handoff path is setup message is sent, and a mobile device is handed off to a new base station, authentication information is transferred from the user's old base station to the new base station and that a mechanism such as HLR authentication or the RADIUS protocol authentication mechanism can be used (see col. 32, line 58 to col. 33 , line 12).

It would therefore have been obvious to one of ordinary skill in the art to combine La Porta's authentication procedure with Bolliger's system in order to ensure that arbitrary users are disallowed from sending unauthorized path setup messages as taught by La Porta.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over La Porta et al as applied to claim 1 above, and further in view of Haartsen (5,598,459).

Regarding claim 6, La Porta further discloses authentication information is transferred from the user's old base station to the new base station and that a mechanism such as HLR authentication or the RADIUS protocol authentication mechanism can be used (see col. 32, line 58 to col. 33, line 12), but fails to explicitly teach wherein all of the security information received by the first base station was received from a third base station.

In an analogous field of endeavor, Haartsen discloses a method in which during a handover of a cellular terminal from a wide area cellular network to a base station, authentication (security) information is provided over through another terminal (see abstract, Fig. 3A).

It would therefore have been obvious to one of ordinary skill in the art to provide for the provision and transfer of authentication information from a different terminal for handoffs in the system of La Porta in order to preserve the provision of secure communication without adding unnecessary overhead and charges as taught by Haartsen.

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bolliger et al as applied to claim 10 above, and further in view of Haartsen (5,598,459).

Regarding claim 13, La Porta further discloses authentication (security) information is transferred from the user's old base station to the new base station and that a mechanism such as HLR authentication or the RADIUS protocol authentication mechanism can be used (see col. 32, line 58 to col. 33, line 12), but fails to explicitly teach that the security information is received from a base station other than the first or second base station.

In an analogous field of endeavor, Haartsen discloses a method in which during a handover of a cellular terminal from a wide area cellular network to a base station, authentication (security) information is provided through another terminal (see abstract, Fig. 3A).

It would therefore have been obvious to one of ordinary skill in the art to provide for the provision and transfer of authentication information from a different terminal for handoffs in the system of La Porta in order to preserve the provision of secure communication without adding unnecessary overhead and charges as taught by Haartsen.

Allowable Subject Matter

9. Claims 8 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ala-Laurila et al. (6,587,680) discloses a system for transferring security association during a mobile terminal handover.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles N. Appiah whose telephone number is 571 272-7904. The examiner can normally be reached on M-F 7:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on 571 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CA

A handwritten signature in black ink, appearing to read 'Charles Appiah', is positioned above the printed name.

**CHARLES APPIAH
PRIMARY EXAMINER**